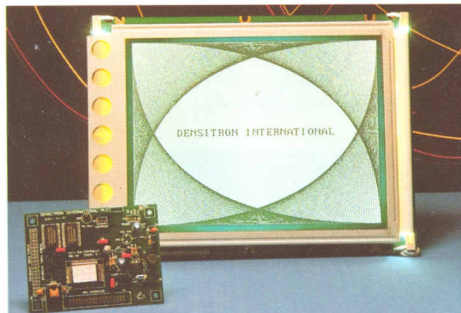
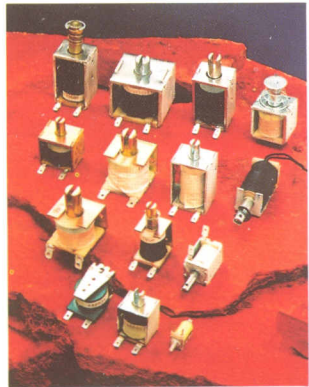


Product Guide



DENSITRON

Introduction

This product guide will provide you with a broad outline of Densitron's range of products, services and geographic locations. Further comprehensive technical data and full applications support is available from our worldwide network of sales offices. On this basis Densitron's total engineering and sales support enables our customers to efficiently integrate the latest in high technology products into their designs.

Displays



Densitron's display range spans all current technologies with particular emphasis on Liquid Crystal Displays. Plasma, Vacuum Fluorescent, LED and Electromechanical solutions are also available.

Colour High Resolution LCD Panels

- 400 x 640 x RGB and 480 x 640 x RGB resolutions available
- FSTN, Supertwist technology displays
- High contrast and excellent colour saturation
- Available with standard delivery times
- Displays upwards of 256K colours dependent on controller used
- A range of standard Densitron interface cards are available enabling the display to be utilised as a VGA monitor or as a terminal via RS232 link.

High Resolution Monochrome Supertwist Graphic Displays

- Pixel formats from 200 x 640 to 780 x 1120 dots
- 480 x 640 and 400 x 640 IBM resolution panels available in a choice of mechanical formats
- High contrast, wide viewing cone STN fluids
- FSTN black and white display options on most modules
- Slim package design
- Single and multiple cold cathode backlight options
- New range of compact 'Palm Top' size 480 x 640 resolution panels
- Reflective, Transflective and Transmissive modes available on most formats
- Fully compatible with Densitron Interface Cards enabling connection to IBM PC 8 bit processors or RS232 VT220 Terminal emulation

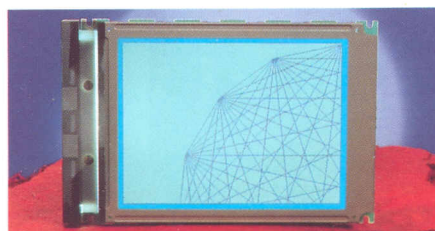
Medium Resolution Monochrome Supertwist Graphic Displays

- Pixel formats from 80 x 32 to 200 x 320 dots
- FSTN black and white display options on selected modules
- All available with high contrast supertwist fluid options
- Contrast enhancing backlight options include EL, LED and high brightness cold cathode technologies
- Optional built-in controller chips on selected models
- Reflective, transflective or transmissive polariser options
- Compact module design
- Low power consumption
- Compatible with Densitron Interface cards

Supertwist/Twisted Nematic LCD Modules

- Character formats 1 x 8 to 4 x 40
- Excellent display contrast
- Wide viewing angle
- Integral E.L. backlight available
- Low current consumption
- Requires only +5VDC or ± 5 VDC
- 8 bit/4 bit parallel or RS232C with optional interface card
- Wide temperature options on selected supertwist and TN modules

Use this range of displays where the highest degree of readability is paramount



LCD Modules with LED Backlights

- Character formats 1 x 8 to 4 x 40
- Long life LED backlight
- LED requires only 5VDC or 12VDC
- Choice of colours: Yellow/Green or Red
- High contrast supertwist or standard 'TN' fluid options
- 8 bit/4 bit parallel or RS232C with optional interface card

Choose this range for products that need long periods of operation in backlight conditions or where special colours are needed.

Large Character LCD Modules

- Character formats 1 x 16 to 4 x 40
- Readable from over 20 feet
- Character heights 0.50" and 0.33"
- High contrast supertwist option on all modules
- Integral E.L. backlight available
- Operating temperature standard 0°C to +50°C extended -20°C to +70°C

- Positive or negative display in reflective transflective or transmissive modes
- Low current consumption
- 8 bit/4 bit parallel or RS232C with optional interface card
- LED backlight on certain modules

Choose for any application where legibility at a distance is required. Typically, POS and industrial terminal applications.

Plasma

- 150:1 high contrast panels
- 120° viewing cone
- 6 x 40 and 12 x 40 alphanumeric panels
- 400 x 640 and 480 x 640 dot graphics panels
- Optional 16/4 levels of gray scale on selected panels
- New range of compact 12 volt only 480 x 640 panels
- Low power versions under development
- Compatible with Densitron Interface cards enabling connection to IBM PC or as a VT220 Terminal via RS232 link

This range is suitable for high density information or graphic systems, typically computer terminals or man machine interfaces.



Vacuum Fluorescent

- High Brightness
- Wide Viewing Angle
- Character Formats 1 x 16 to 6 x 40
- Single +5v operation
- Chip in Glass Technology
- Low Current
- Compact Module Design
- Colours from Red through Green to Blue
- Graphic Modules available
- Large range of standard glass

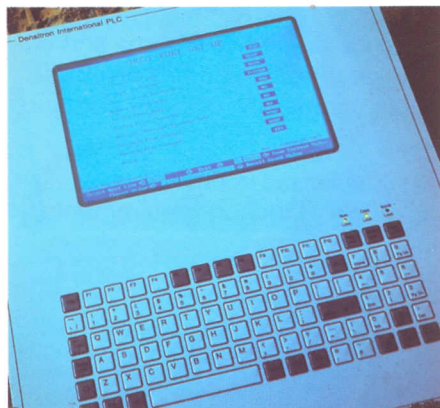
Use this range of modules where high brightness and ease of viewing is of paramount importance.



Custom Display Service

Densitron can offer a comprehensive custom design service from the simple addition of cable and connectors through to a complete custom module design. Contact your local sales office where our experienced technical sales engineers are on hand to advise and help you design the display module to meet your individual requirements.

Flat Panel Terminals



Densitron has developed and introduced a range of commercial and industrial flat panel terminals. These use the latest Plasma and FSTN LCD display technologies in conjunction with our unique terminal controllers, in a range of ergonomically designed housings.

- **DT60** 400 x 640 Plasma Display Terminal for the office environment
- **DT61** 400 x 640 Plasma Display Terminal in OEM kit of parts format for you to include in your own housing
- **DT63** Metal cased 400 x 640 Plasma Terminal for industrial applications
- **DT64** Metal cased 400 x 640 Plasma CGA monitor with infra red touch overlay for industrial applications
- **DT65** Metal cased Plasma Terminal with touch overlay for industrial applications
- **DT52** 400 x 640 LCD Terminal for commercial applications
- Colour LCD Terminal suitable for both commercial and industrial applications
- Most popular terminal emulations are available for the above units. Consult your local sales office for detailed information.

Interface Cards

Densitron's in-house Design and Development Team has produced a range of controller cards enabling the user of high resolution flat panel displays to easily interface to the outside world.

- **PCX-35** Provides for simultaneous connection to both CRT and Flat panel VGA format displays. Plasma, TFT, monochrome and colour FSTN lcds can all be driven as a VGA monitor.
- **PCX-25** Connect your 480 x 640 resolution Plasma, monochrome LCD or colour LCD display as a VGA resolution monitor
- **PCX-10** This card enables a 200 x 640 or 400 x 640 resolution LCD, Plasma or EL panel to act as a CGA resolution monitor of an IBM PC or equivalent personal computer
- **SPX-20** A range of cards enabling a 400 x 640 Plasma or LCD to act as a VT220 Terminal via a RS232 link to the host
- **DBC-02** Connect your high resolution LCD panel to a micro-controller via a high speed parallel link
- **SGI-01** An intelligent controller card designed to drive small graphic LCD displays up to 128 x 256 pixel resolution from an RS232 or IC interface. An extensive range of command functions allows the user to define text type and size together with a comprehensive set of graphic instructions.

Electro Mechanical Devices

Solenoids

Densitron brings to the marketplace one of the world's broadest line of high performance solenoids. Choose from the large range of standard models available or utilize our experienced engineering staff to value engineer a model to meet your specific requirements for performance, life, quality and price.

Rotary Type

- Rotation angles: 25°, 35°, 45°, 67.5° and 95°
- Long life models available
- Torques to 113kg/cm (97lb/in)
- Special finish options
- Return springs, dust covers and special shaft configurations by request.

Push Pull Type

- Short or long stroke versions
- Long life models available
- Forces to 200kg (350lbs)
- Diameters from 11.3mm to 87mm (0.45 to 3.4 inches)
- Dual coil winding, special finishes and return springs available.

Tubular Type

- Diameters from 13mm to 35mm (0.51 to 1.5 inches)
- Long life models available
- Special pole shapes for customising force stroke curves
- Push or Pull versions
- Return springs

Open Frame Type

- Sizes from miniature to 51mm (2") square
- Special coils, plungers and mounting bracket options
- Return springs available

Permanent Magnet Solenoids

- Requires no power to hold position
- 1 or 2 position models available
- Open frame or rotary type



Step Motors

DC Stepper Motors

- Hybrid type
- 1.8° step angle
- High torque and pps because of closer tolerance motor – which allows for thinner package
- Various sizes to meet a variety of performance requirements.

DC Motors

Permanent Magnet DC Motors

- Diameters from 23mm to 105mm standard
- Wide choice of windings available
- Motors available with or without gear heads, with or without encoders
- Output torques up to 800g/cm (1111.0 oz/in)
- Specials on request.

Pancake Fans

- Ultra Thin Dimensions
 - 25 x 25 x 10mm
 - 40 x 45 x 16mm
 - 60 x 60 x 16mm
 - 80 x 80 x 16mm
 - 92 x 92 x 18mm

AC Solenoids

- 115 Vac Intermittent Duty
- Pull force 2-3Kgf (4.4-6.6lbs/f)
- Stroke 15-20mm

Additional Products

Memory Cards

Densitron can supply a wide range of Memory and Smart Cards, including:

- Contactless, hermetically sealed cards
- Edge connector cards 1.8mm thick
- Edge connector cards 3.1mm thick with shutter
- Two part connector cards
- J.E.I.D.A. PCMCIA standard memory cards, ISO standard smart cards.

Rapidot

The Rapidot represents the state of the art in electromechanical displays. Here it is possible to produce computer controlled, high resolution, colourful animated images, suitable for large advertising and public information display boards.

- **Colourful:** 6 colour reflective display
- **Bright:** High fill factor provides brilliant high contrast images



- **Fast:** Up to 10 frames per second allows animation
- **Computer Control:** Remote, single or multiple signs controlled via modem.

Densitron International PLC

Densitron International is a world wide technical sales organisation with its technical centres located in the three geographic regions of Europe, North America and Asia.

Densitron's largest product range is displays, which spans all of the current technologies including LCD, Plasma and Vacuum Fluorescent. To complement these displays Densitron's in house Design and Development team has produced a range of controller cards enabling the simple connection of these complex displays to peripheral equipment.



The Electromechanical Division of Densitron specialises in providing electromechanical products to meet a wide variety of motion requirements. The primary range being high grade precision linear and rotary solenoids.

To support this range of solenoids, Densitron has added further high technology EM products, including DC motors, Stepper motors and fans.

Densitron's Computer Peripheral Division has developed a range of flat panel terminals and monitors using colour and monochrome liquid crystal displays and plasma technology. The controllers and software have been developed by Densitron to be compatible with the majority of currently available CRT terminals. The Monitor controller cards are compatible with current PC architecture.

Densitron is continually at the forefront of technology, responding to the needs of our customers who require products of the highest quality, delivered anywhere in the world.



■ Main & European Offices
▲ Sales Offices

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